

## CLAIMS

1/ An accommodating intraocular implant for locating in the capsular bag, the implant comprising a single piece of elastically deformable material constituting a central lens (1) and at least two haptic portions (2, 4) in the form of radial arms for bearing via their free ends against the equatorial zone of the capsular bag, the implant being characterized in that the free end of each radial arm (2, 4) is fitted with a shoe (6, 7) of substantially toroidal outside surface enabling the implant to bear against the equatorial zone of the bag, the connection between each shoe (6, 7) and the corresponding arm (2, 4) being of the hinge type situated in the vicinity of the posterior edge of the shoe (6, 7) and being formed by a first thin portion (2d, 4d) of the arm, while the connection between each arm and the lens is of the hinge type implemented at the anterior surface of the lens by a second likewise thin portion (2c, 4c) of the arm, the plane ( $P_1$ ) containing the first thin portions being situated behind the plane ( $P_2$ ) containing the second thin portions.

2/ An implant according to claim 1, characterized in that between said hinge-forming thin portions, each arm (2, 4) has a posterior bulge (2b, 4b).

3/ An implant according to claim 1 or claim 2, characterized in that each arm (13, 14) is in the form of an arch having feet (13a, 13b, 14a, 14b) connected to the lens (1) via thin zones oriented along a line (19, 20) perpendicular to the middle radius of the arm.

4/ An implant according to any preceding claim, characterized in that it includes at least two rigid radial extensions (10, 12) extending from the lens (1) and interposed between pairs of haptic arms, each extension being of radial length shorter than that of the

arms and serving to enable the implant to come into abutment against the edges of the opening in the capsular bag.

5 5/ An implant according to claim 4, characterized in that the abutment-extensions are situated away from the bisectors of the angles between two consecutive radial arms.

10 6/ An implant according to claim 3 and claim 4, characterized in that each radial extension forms the common zone (15, 16, 17, 18) for connecting pairs of adjacent feet of two arch-shaped arms to the lens.

15 7/ An implant according to claims 4 and 6, characterized in that it comprises three arms (21, 22, 23) in the form of arches regularly disposed around the lens (1).

20 8/ An implant according to any preceding claim, characterized in that the angular extent of contact between all of the shoes and the equatorial portion of the bag is not less than  $120^\circ$ .

25 9/ An accommodating artificial lens device comprising an implant (100) according to any one of claims 1 to 8, characterized in that it further comprises an elastically deformable element (120, 130) separate from the implant, the element having at least a radially-deformable gutter-shaped peripheral portion whose diameter at the bottom of  
30 the gutter in the rest state is no greater than the outside diameter of the implant measured across the outside faces of the shoe (110) when the implant is in the rest state.

35 10/ A device according to claim 9, characterized in that the equatorial diameter of the separate element (120, 130) measured outside the gutter when in the rest state

corresponds to the equatorial diameter that the capsular bag used to have when the patient for whom the device is intended was 20 to 30 years old.

- 5 11/ A device according to claim 9, characterized in that the above-mentioned element (120) is in the form of a dome with a posterior web (125) whose edge is in the form of a gutter.
- 10 12/ A device according to claim 9, characterized in that the above-mentioned separate element (130) is restricted to a gutter-shaped ring whose posterior lip (133b) undulates in festoons.
- 15 13/ A device according to any one of claims 9 to 12, characterized in that the gutter-shaped portion has a plurality of through slots (126, 136).
- 20 14/ A device according to any one of claims 9 to 13, characterized in that the anterior lip (122, 132) of the gutter-shaped portion has a radius smaller than the radial dimension of the abutment-extensions of the implant.
- 25 15/ A device according to any one of claims 9 to 12, characterized in that the separate element (120, 130) has greater thickness (124, 134) at least in register with the end of each arm of the implant adjacent to its shoe, said extra thickness forming a posterior bearing abutment
- 30 of the corresponding arm.
- 35 16/ A device according to any one of claims 9 to 15, characterized in that it includes a third piece (150, 160) formed by a ring whose greatest diameter is no greater than the inside diameter of the gutter minus the thickness of the shoes of the arms of the implant as measured when the device is in its equilibrium state.